



**Department of Computer Science and Engineering**

*Presents*

**Rong Zheng, Associate Professor, McMaster University**

## **Toward Autonomous Structure Health Monitoring**

Structure health monitoring is crucial in ensuring the safe operation of civil structures such as bridges and highways both at the early stage of constructions as well as during operations. Smart aggregate (SA) is a multi-functional Piezo-electric transducer based sensor that can be utilized for passive and active sensing. In this talk, we present the hardware design and algorithm development utilizing SAs for autonomous structure health monitoring and impact detection.

Bio: Rong Zheng received her Ph.D. degree from Dept. of Computer Science, University of Illinois at Urbana-Champaign and earned her M.E. and B.E. in Electrical Engineering from Tsinghua University, P.R. China. She was on the faculty of the Department of Computer Science, University of Houston from 2004 to 2012. Rong Zheng was a visiting Associate Professor in the Hong Kong Polytechnic University from Aug. 2011 to Jan. 2012; and a visiting Research Scientist in Microsoft Research, Redmond with the Sensing and Energy Research Group between Feb. 2012 and May 2012. She is now a tenured Associate Professor in McMaster University, Canada. Rong Zheng's research interests include network monitoring and diagnosis, cyber physical systems, and mobile computing. She received the National Science Foundation CAREER Award in 2006. She serves on the technical program committees of leading networking conferences including INFOCOM, ICDCS, ICNP, etc. She served as a guest editor for EURASIP Journal on Advances in Signal Processing, Special issue on wireless location estimation and tracking, Elseviers Computer Communications – Special Issue on Cyber Physical Systems; and Program co-chair of WASA'12 and CPSCoM'12.

**Tuesday, February 26, 2012**

**11-12:00 pm**

**University at Buffalo – North Campus – Davis 113A**

This talk is free and open to the public

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